

EARLY ADOPTERS

State Approaches to Testing School Drinking Water for Lead in the United States



PROFILE

Washington, D.C.

Summary of Program Features

Washington, D.C. initiated a school drinking water lead testing policy in 2016. This summary is based on a review of program documents collected between January 2018 – June 2018 and communication with Washington, D.C. contacts. In 2017, Washington, D.C. adopted a new policy with the passage of the Childhood Lead Exposure Prevention Amendment Act of 2017. The features of this policy are not detailed in this profile.

School Drinking Water Testing Policy/Program Overview

Policy/Program Feature	Information from Policy/Program Documents
<i>Background</i>	
Name	No name
Date(s) of Water Policy/Program	2016 ¹
Issuing Authority	Other: Department of General Services ¹
Agency Responsible for Program Management	Department of General Services ¹
Policy or Program	Policy ^{1,2}
One-time or Surveillance Program	Surveillance ^{1,2}
Mandatory/Voluntary for Schools	Mandatory ²
Partnership with Local/Community Water Supplier/ System	Not specified
Other Key Partnerships	Not specified
References or Uses the EPA 3Ts	Not specified
<i>Program Coverage</i>	
School Type (Public, private, charter)	Public schools ^{1,2}
Grade Levels	Not specified
Includes Testing for Lead	Yes ^{1,2}
Includes Treatment/Remediation	Yes ^{1,2}
Schools Eligible to Participate	
All schools	Not specified
OR (select all that apply)	
Schools of a certain building age	Not specified
Schools that serve certain ages/ demographics	Not specified
Schools that are their own local/community water supplier	Not specified
Schools that use local/community water supplier	Not specified
Schools that have not received a waiver	Not specified
<i>Funding</i>	
Funding Source	Not specified
Funding Amount	\$1,500,000 ¹
Covers Sampling at Taps	Not specified
Covers Testing in Lab	Yes ¹
Covers Treatment/Remediation	Yes ¹

Sampling Information

Policy/Program Feature	Information from Policy/Program Documents
<i>Background</i>	
Sampling/Testing Process One-Time or Recurring	Recurring (annually) ^{1,2}
Number of Buildings/Facilities Sampled (All or a Portion?)	Not specified
Types of Taps Sampled	Drinking ^{1,2}
Number of Taps Sampled Per School/Building (All or a Portion?)	A portion (taps used for drinking) ²
<i>Initial Sampling at Taps</i>	
Stagnation Period	Not specified
First Draw	Not specified
Flushing Period	Not specified
Second Draw (Flushed Sample)	Not specified
Additional Initial Samples	Not specified
Sample Size of Water	Not specified
Action Level for Lead	1 ppb, but changed to 5 ppb ^{*1,3}
<i>Action Required When Samples Exceed Action Level for Lead</i>	
Follow-Up Draws	Not specified
Flushing Period	Not specified
Sample Size of Water	Not specified
Additional Draws	Not specified

**Action level used for further analysis in Early Adopters study*

Testing/Remediation/Communication Information

Policy/Program Feature	Information from Policy/Program Documents
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Testing

Type of Lab Used for Testing	Not specified
Sample(s) that Require Action if Results are Elevated	Not specified

Remediation

Short-Term Measures	Not specified
Long -Term Measures	Yes, measures are listed ^{1,2}

Communication

Groups Notified of Test Results	General public ²
Type of Results Shared (outlet level, building level, school level)	Not specified

Sources:

1. Executive Office of the Mayor. District Government Adopts New Lead Testing Policy. DC.Gov. <https://mayor.dc.gov/release/district-government-adopts-new-lead-testing-policy>. Accessed April 12, 2018.
2. Department of General Services. Revised Prevention Protocol - Safe Drinking Water. 2016. Received by email on May 1, 2018.
3. Phone and Email Communication with District of Columbia Department of General Services. June 2018.

Summary of Water Test Results

This report features data collected through the Washington, D.C. School Drinking Water Lead Testing Program, initiated in 2016. Data provided by the District program on May 1, 2018 documented findings from 6,783 drinking water samples that were collected from 187 organizations. The District's program was ongoing through 2016. While many states may collect water quality data from a number of organizations, this profile is focused on water quality testing completed in public schools serving grades pre-Kindergarten (PK)-12.

Table 1: Washington, D.C. School Drinking Water Lead Testing Program Results Summary

In Washington, D.C., the level of lead found in a drinking water sample that warrants action, or the “action level,” is 5 ppb for a water sample of 250mL. This summary describes “first draw” samples taken in Washington, D.C.’s School Drinking Water Lead Testing program. The “first draw” is a sample that is taken from the tap as soon as the water is turned on. Additional “draws” may be taken according to the district’s procedures.

In Washington, D.C., data were reported by fixture. Each school reported the date and time of collection, building name, location of fixture, sample identification number, the result from the draw, and whether the sample had a lead content level that was above or below the “action level.”

- ◇ In Washington, D.C., seventy-eight percent (78%) of public schools serving grades PK-12 had one or more draws at or above the District’s action level for lead
- ◇ In Washington, D.C., eight percent (8%) of first draw samples tested from Washington, D.C. public schools serving grades PK-12 had a lead content that was at or above the District’s action level for lead

	All schools providing drinking water quality testing results	Public schools serving grades PK-12 providing drinking water lead testing results*
<i>School-Level Summary</i>		
Number of schools with test result for lead	112	108 (96%)
Average (min/max) number of samples taken at each school	55.2 (1, 185)	56.6 (2, 185)
Number (%) of schools with one or more samples at or above the State’s “action level”	87 (78%)	84 (78%)
<i>Outlet/Tap-Level Summary</i>		
Number of samples	6,178	6,114
Number (%) of samples at or above the State’s “action level”	494 (8%)	483 (8%)

* See table 3 for characterization of schools

Table 1a: Washington D.C. School Drinking Water Lead Testing Program Results Summary *By School Level*, among the 108 Public Schools Serving Grades PK-12 Providing Drinking Water Lead Testing Results*

	Primary	Middle	High	Middle/High
<i>School-Level Summary</i>				
Number of schools with test result for lead	78	12	16	2
Average (min/max) number of samples taken at each school	49.4 (7, 126)	61.7 (20, 157)	78.3 (2, 185)	132.0 (125, 139)
Number (%) of schools with one or more samples at or above the State's "action level"	58 (74%)	11 (92%)	13 (81%)	2 (100%)
<i>Outlet/Tap-Level Summary</i>				
Number of samples	3,857	740	1,253	264
Number (%) of samples at or above the State's "action level"	201 (5%)	71 (10%)	172 (14%)	39 (15%)

* See table 3 for characterization of schools

Additional Details on Findings from Washington, D.C.

School Eligibility for Washington, D.C., School Drinking Water Lead Testing Program

Eligible schools according to available program documents:

- ◇ Public schools

Characteristics of Schools in the Washington, D.C., School Drinking Water Lead Testing Program

The National Center for Educational Statistics (NCES) is the primary federal entity for collecting and analyzing educational data in the United States. Each year, the NCES reports a directory of all public schools in the United States and their characteristics in the Common Core of Data.

In order to better understand the characteristics of schools that were being served by the Washington, D.C., School Drinking Water Lead Testing Program, we matched demographic data on the schools and students available in the NCES Common Core of Data (2015-2016) school directory to the schools present in the data available from the District's drinking water testing program. We matched these schools using the school names and other public data sources.

We identified 108 Washington, D.C., schools with drinking water lead testing results provided by the Washington, D.C., School Drinking Water Lead Testing Program that were also present in the 2015-2016 NCES Common Core of Data. These 108 schools represent 96% of the 112 schools serving grades PK-12 that had drinking water lead testing results reported in the state program data.



Table 2: Number and Types of Organizations Represented in Washington, D.C., School Drinking Water Lead Testing Program Data¹

Type of Organization	Number	Category Definition
Schools Serving Grades PK-12	112	Sum of all school types serving grades PK-12
Public schools serving grades PK-12 (including public charter), with identifiable school characteristics	108	All public schools with grades PK-12, including public charter schools, with identifying information in the national census of public schools (National Center for Education Statistics (NCES) Common Core of Data, 2015-2016)
Other public schools serving grades PK-12, without identifiable school characteristics	4	All other public schools with grades PK-12, including public charter schools, without identifying information in the national census of public schools (NCES Common Core of Data, 2015-2016)
Other organization or facility types	75	Other organization or facility types such as recreation centers, educational administration buildings, afterschool programs
Total number of organizations where data were collected	187	Total number of organizations where data were collected as of 2016

1. Washington, D.C., schools with drinking water lead test results provided by the Washington, D.C., program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by Washington, D.C., School Drinking Water Lead Testing Program data or other public data sources (i.e., state school directory, school district websites).

Characteristics of Public Schools in Washington, D.C. Serving Grades PK-12

In Washington, D.C.,

- ◇ All public schools serving grades PK-12 were considered eligible to participate in the district's drinking water testing program for this study.
- ◇ There are 220 public schools serving grades PK-12, according to the National Center for Education Statistics Common Core of Data 2015-2016.
- ◇ Of these, 108 (49%) schools had lead testing findings that were collected via the Washington, D.C., School Drinking Water Lead Testing Program in schools in 2016. These 108 schools serve 56% of Washington, D.C.'s PK-12 students.

Table 3: Number and Characteristics of Washington, D.C., Public Schools Serving Grades PK-12 (NCES Common Core of Data 2015-16)¹

	Schools Eligible to Participate in the Washington, D.C., School Drinking Water Lead Testing	Schools with Drinking Water Lead Test Results (2016) ^{2,3}
NUMBER OF SCHOOLS²	220	108 (49%)
<i>School-Level⁴</i>		
Primary	145 (66%)	78 (72%)
Middle	33 (15%)	12 (11%)
High	35 (16%)	16 (15%)
Middle/High	7 (3%)	2 (2%)
<i>Metro Status/Locale⁴</i>		
City	219 (100%)	108 (100%)
Rural	1 (<1%)	0
NUMBER OF STUDENTS IN GRADES PK-12	82,486	46,143 (56%)
<i>Number (%) of students eligible for free or reduced price meals</i>	63,274 (77%)	35,652 (77%)
<i>Number (%) students by race and ethnicity⁴</i>		
White	8,459 (10%)	6,206 (13%)
Black	58,644 (71%)	29,416 (64%)
Asian	1,196 (1%)	874 (2%)
Hispanic	12,447 (15%)	8,600 (19%)
Hawaii Native/Pacific Islander	88 (<1%)	64 (<1%)
American Indian/Alaska Native	128 (<1%)	45 (<1%)
Two or More Races	1,524 (2%)	938 (2%)

1. Public schools and their characteristics were identified using the National Center for Education Statistics Common Core of Data 2015-2016, Public Elementary/Secondary School Universe Survey Data, downloaded March 22, 2018 from <https://nces.ed.gov/ccd/pubschuniv.asp>.
2. Only schools identified in the 2015-2016 NCES Common Core of Data database are included here.
3. Washington, D.C., schools with drinking water lead test results provided by the Washington, D.C., program were matched to the 2015-2016 NCES Common Core of Data database using school and district names and other information provided by Washington, D.C., School Drinking Water Lead Testing Program data or other public data sources (i.e., state school directory, school district websites).
4. Percentages may not add up to exactly 100% due to rounding.

Citation:

Cradock AL, Poole MK, Vollmer LY, Barrett JL, Flax C, Hecht CA. State Approaches to Testing School Drinking Water for Lead in the United States [State Profile: Washington, D.C.]. Boston, MA: Harvard Prevention Research Center on Nutrition and Physical Activity at the Harvard T.H. Chan School of Public Health; 2019. Available at <https://www.hsph.harvard.edu/prc/projects/school-research/early-adopters>. Address correspondence to Angie Cradock, ScD, MPE at acradock@hsph.harvard.edu.

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